

MAGNETIC RANDOM ACCESS MEMORY AND METHOD OF FABRICATING THEREOF

Abstract

A device structure and method for forming an interconnect structure in a magnetic random access memory (MRAM) device. In an exemplary embodiment, the method includes defining a magnetic stack layer on a lower metallization level, the magnetic stack layer including a non-ferromagnetic layer disposed between a pair of ferromagnetic layers. A conductive hardmask is defined over the magnetic stack layer, and selected portions of the hardmask and the magnetic stack layer, are then removed, thereby creating an array of magnetic tunnel junction (MTJ) stacks. The MTJ stacks include remaining portions of the magnetic stack layer and the hardmask, wherein the hardmask forms a self aligning contact between the magnetic stack layer and an upper metallization level subsequently formed above the MTJ stacks.